

including meeting public safety standards for robustness, security, redundancy, and interoperability.⁸⁵⁶ Frontline contended, however, that the specifications for the shared broadband network should be left to negotiation between the commercial licensee and the public safety broadband licensee, and its proposed rule would merely require that the commercial licensee “consult” with the public safety broadband licensee before determining network specifications. Frontline also proposed that the commercial licensee’s commercial operation be subject to the same survivability, throughput, security, and interoperability requirements specified by the public safety broadband rules.⁸⁵⁷

404. Public safety commenters argue that Frontline’s proposal that the commercial licensee only be obligated to “consult” with public safety is insufficient to ensure that the technical specifications established for the network would meet public safety needs.⁸⁵⁸ APCO argues that “the network sharing agreement must contain provisions to address the required levels of service reliability, necessary security levels, system maintenance, redundancy and other critical matters.”⁸⁵⁹ NPSTC states that “the network’s infrastructure and operations, and its quality of service, must reflect public safety’s long identified standards of coverage, priority access and system restoration, reliability and security.”⁸⁶⁰ NPSTC also states that capacity is a key consideration, arguing that “the Commission should require a detailed capacity plan as one of the central elements in the negotiated agreement”⁸⁶¹ RCC expresses concern about the commercial licensee’s ability to meet public safety needs, noting that “commercial interest cannot, consistent with profit maximization, provide the coverage, network robustness, maintenance and operations protocols, and other system characteristics required by public safety.”⁸⁶² Other commenters express concern about the potential for public safety network requirements to make the spectrum less desirable to potential bidders. For example, AT&T asserts that uncertainty regarding the scope of the “network design requirements” would make it difficult for potential bidders to make an informed business judgment about the spectrum’s value.⁸⁶³

405. Discussion. In order to have a successful public/private partnership with a shared nationwide interoperable broadband network infrastructure that meets the needs of public safety, we adopt certain network requirements. The public/private partnership network will serve as the nation’s public safety wireless broadband network infrastructure, so it must meet the requirements of a public safety communications network. Accordingly, we require that the network incorporate, at a minimum, the following:

- Specifications for a broadband technology platform that provides mobile voice, video, and

⁸⁵⁶ Frontline 700 MHz Public Safety Ninth Notice Comments at 17.

⁸⁵⁷ Frontline Mar. 6 Comments in WT Docket No. 06-150 at 13.

⁸⁵⁸ See NATOA 700 MHz Further Notice Comments at 12 (“the mere duty to ‘consult’ does nothing to protect the interests and goals of the public safety community. There is apparently no requirement that the E Block licensee adopt any recommendation of the public safety group.”).

⁸⁵⁹ APCO 700 MHz Further Notice Comments at 18.

⁸⁶⁰ NPSTC 700 MHz Further Notice Comments at 12.

⁸⁶¹ *Id.* at 13. A number of commenters also suggested that the public safety community develop a “statement of requirements” and publish it substantially prior to the auction. See, e.g., APCO 700 MHz Further Notice Reply Comments at 15; Frontline 700 MHz Further Notice Reply Comments at 12-13; NENA 700 MHz Further Notice Reply Comments at 2; Verizon Wireless 700 MHz Further Notice Reply Comments at 7.

⁸⁶² RCC 700 MHz Further Notice Reply Comments at 52.

⁸⁶³ AT&T 700 MHz Further Notice Comments at 13; see also Verizon Wireless 700 MHz Further Notice Reply Comments at 23-24, 25 (clear specifications of public safety’s requirements must be provided in advance of the auction to comply with the requirements of Section 309(j)(3)(E) of the Act and ensure commercial success).

data capability that is seamlessly interoperable across agencies, jurisdictions, and geographic areas. The platform should also include current and evolving state-of-the-art technologies reasonably made available in the commercial marketplace with features beneficial to the public safety community (e.g., increased bandwidth).

- *Sufficient signal coverage to ensure reliable operation throughout the service area consistent with typical public safety communications systems (i.e., 99.7 percent or better reliability).*
- Sufficient robustness to meet the reliability and performance requirements of public safety. To meet this standard, network specifications must include features such as hardening of transmission facilities and antenna towers to withstand harsh weather and disaster conditions, and backup power sufficient to maintain operations for an extended period of time.
- Sufficient capacity to meet the needs of public safety, particularly during emergency and disaster situations, so that public safety applications are not degraded (i.e., increased blockage rates and/or transmission times or reduced data speeds) during periods of heavy usage. In considering this requirement, we expect the network to employ spectrum efficient techniques, such as frequency reuse and sectorized or adaptive antennas.
- Security and encryption consistent with state-of-the-art technologies.
- A mechanism to automatically prioritize public safety communications over commercial uses on a real-time basis and to assign the highest priority to communications involving safety of life and property and homeland security consistent with the requirements adopted in this Second Report and Order.
- Operational capabilities consistent with features and requirements specified by the Public Safety Broadband Licensee that are typical of current and evolving state-of-the-art public safety systems (such as connection to the PSTN, push-to-talk, one-to-one and one-to-many communications, etc.).
- Operational control of the network by the Public Safety Broadband Licensee to the extent necessary to ensure public safety requirements are met.
- The Public Safety Broadband Licensee shall have the right to determine and approve the specifications of public safety equipment that is used on the network, and the right to purchase its own subscriber equipment from any vendor it chooses, to the extent such specifications and equipment are consistent with reasonable network control requirements established in the NSA.
- A requirement, as explained more fully herein, that the Upper 700 MHz D Block licensee make available to the Public Safety Broadband Licensee at least one handset that would be suitable for public safety use and include an integrated satellite solution capable of operating both on the 700 MHz public safety spectrum and on satellite frequencies.

406. These requirements are to be implemented by the parties through the NSA, which will also include the detailed specifications of the network that the D Block licensee will construct. By allowing the parties to determine specific details, including the technologies that will be used, subject to approval by the Commission, we provide them with flexibility to evaluate the cost and performance of all available solutions while ensuring that the shared wireless broadband network has all the capabilities and attributes needed for a public safety broadband network.

b. Spectrum Use

407. Background. Under Frontline's proposal, the shared network would operate on both the commercial licensee's spectrum and the public safety 700 MHz broadband license spectrum. In its filings

on which we sought comment, Frontline proposed that the spectrum from the two licenses would be shared in two ways. First, it proposed that the public/private network would provide commercial services on 10-megahertz of spectrum licensed for commercial use and on the public safety broadband spectrum on a secondary, preemptible basis.⁸⁶⁴ Second, Frontline proposed that the network would provide public safety users with broadband service on the public safety broadband spectrum but also provide public safety agencies with priority access to its commercial spectrum in emergencies.⁸⁶⁵ With regard to emergency priority access, Frontline further proposed that the procedures and protocols for such use should be defined in an agreement between the commercial licensee and the national public safety licensee.⁸⁶⁶

408. Prior to Frontline's submission of its proposal, we had sought comment on the issue of commercial use of public safety spectrum on a secondary basis. Specifically, in the *700 MHz Public Safety Ninth Notice*, we sought comment on whether to permit the leasing of the public safety broadband spectrum to commercial providers on a secondary, unconditionally preemptible basis.⁸⁶⁷ We noted that Section 337(a)(1) of the Act requires that the 24 megahertz of 700 MHz spectrum be allocated for "public safety services."⁸⁶⁸ We also sought comment in the *700 MHz Public Safety Ninth Notice* on whether it would be necessary, in order to allow the commercial use of the public safety spectrum on a secondary basis, to make a specific allocation for such secondary use in the 700 MHz Public Safety Band.⁸⁶⁹ In the *700 MHz Further Notice*, we noted that Frontline's proposal was premised on, among other things, our permitting commercial operations in the public safety spectrum on a secondary basis as proposed in the *700 MHz Public Safety Ninth Notice*.⁸⁷⁰

409. Commenters have addressed both aspects of the proposed spectrum sharing by the public/private partnership. With regard to the proposal to allow the commercial licensee in the public/private partnership to use public safety spectrum for commercial operations on a secondary basis, some commenters argue that Section 337 of the Act prohibits the commercial use of public safety spectrum even on a secondary basis.⁸⁷¹ Specifically, several argue that the provision of commercial services in the public safety spectrum on a secondary basis would violate the requirement of Section 337(a)(1) that such spectrum be allocated for "public safety services."⁸⁷²

⁸⁶⁴ Frontline *700 MHz Public Safety Ninth Notice* Comments at 7; see also *700 MHz Further Notice*, 22 FCC Rcd at 8162 ¶ 274.

⁸⁶⁵ Frontline *700 MHz Public Safety Ninth Notice* Comments at i.

⁸⁶⁶ Frontline Mar. 6 Comments in WT Docket No. 06-150, at 14.

⁸⁶⁷ See *700 MHz Public Safety Ninth Notice*, 21 FCC Rcd at 14848 ¶ 41.

⁸⁶⁸ See *id.* at 14849 ¶ 46.

⁸⁶⁹ See *id.*

⁸⁷⁰ *700 MHz Further Notice*, 22 FCC Rcd at 8161-62 n.553.

⁸⁷¹ CTIA *700 MHz Further Notice* Comments at 19; L-3 *700 MHz Further Notice* Comments at 10; MetroPCS *700 MHz Further Notice* Comments at n.132; NATOA *700 MHz Further Notice* Comments at 15; New York, NY *700 MHz Further Notice* Comments at 5-7; RCC *700 MHz Further Notice* Comments at 20-22. Cf. Cyren Call *700 MHz Further Notice* Reply Comments at 28-31 (arguing that Section 337 does not preclude the secondary commercial use of the 700 MHz public safety spectrum); Frontline *700 MHz Further Notice* Reply Comments at 23-27 (arguing that Sections 1 and 301 permit, and Section 337 does not preclude, making public safety spectrum available for commercial use on a secondary basis).

⁸⁷² See CTIA *700 MHz Further Notice* Comments at 19-20; L-3 *700 MHz Further Notice* Comments at 10; MetroPCS *700 MHz Further Notice* Comments at n.132; NATOA *700 MHz Further Notice* Comments at 15; New York, NY *700 MHz Further Notice* Comments at 5-7; RCC *700 MHz Further Notice* Comments at 20-22.

410. In addition, some commenters argue that permitting public safety users to access the 700 MHz commercial spectrum on a priority basis during emergencies would also violate the requirement under Section 337(a)(2) that such spectrum be allocated “for commercial use.”⁸⁷³ These commenters also *express concerns involving the implementation of emergency priority access. MetroPCS argues that any system that relies on the implementation of a complex priority scheme during an emergency would not be beneficial to public safety.*⁸⁷⁴ It also argues that preemption of commercial access during times of emergency could result in fatal consequences, and that there is near unanimous agreement that such callers must be able to use their mobile phones to call for help in such situations, such as by dialing 911.⁸⁷⁵ Verizon Wireless argues that, instead of adopting the Frontline proposal, the Commission should consider establishing rules for the commercial 700 MHz Band spectrum similar to the Commission’s existing Part 64 Priority Access Rules, which permit carriers voluntarily to offer public safety entities priority access to open channels.⁸⁷⁶

411. Other commenters, however, support providing public safety users with priority access to commercial spectrum during emergencies.⁸⁷⁷ APCO asserts that the current public safety broadband allocation in the 700 MHz Band is insufficient to address all of public safety’s requirements, especially during emergency operations.⁸⁷⁸ California supports the proposal, but emphasizes that priority access must be instantaneously available to field users when they choose and that preemption of commercial traffic should not require any hierarchical approval chain.⁸⁷⁹ Several commenters raise concerns that the term “emergency” is not sufficiently defined and urge the Commission to provide a more detailed explanation of the term in its rules.⁸⁸⁰ APCO asserts that the definition should take into account that “much of what a first responder does on a day to day basis involves an emergency situation.”⁸⁸¹ GEOCommand asserts that unconditional access solely as defined by a public safety entity may be too problematic, but that excessively limited access is equally problematic.⁸⁸² NPSTC asserts that priority access will be of little or no value if limited to large incidents, that virtually every public safety response is an emergency “to someone” and that the need for access should not be defined by the character of the incident but rather by the need to assist citizens.⁸⁸³ Finally, California asserts that an exception to traffic preemption should be made for 911 calls and asserts that the NSA should also allow for other exceptions as they arise.⁸⁸⁴

412. Discussion. We permit the Public Safety Broadband Licensee to provide access on a

⁸⁷³ See *id.* at n.132.

⁸⁷⁴ See *id.* at 67.

⁸⁷⁵ See *MetroPCS 700 MHz Further Notice Comments* at 69.

⁸⁷⁶ See *Verizon Wireless 700 MHz Further Notice Comments* at 58; 47 C.F.R. Part 64 App. B.

⁸⁷⁷ See, e.g., *APCO 700 MHz Further Notice Comments* at 19; *California 700 MHz Further Notice Comments* at 6.

⁸⁷⁸ See *APCO 700 MHz Further Notice Comments* at 19.

⁸⁷⁹ See *California 700 MHz Further Notice Comments* at 6.

⁸⁸⁰ See *GEOCommand 700 MHz Further Notice Comments* at 8 (arguing that Frontline proposal leaves the most critical element of the relationship undefined and urges the Commission to consider the precise nature and scope of the term necessary to justify access to E Block spectrum); *NATOA 700 MHz Further Notice Comments* at 11.

⁸⁸¹ See *APCO 700 MHz Further Notice Comments* at 19.

⁸⁸² See *GEOCommand 700 MHz Further Notice Comments* at 9.

⁸⁸³ See *NPSTC 700 MHz Further Notice Comments* at 14.

⁸⁸⁴ See *California 700 MHz Further Notice Comments* at 7.

secondary and preemptible basis to this spectrum, pursuant to the spectrum lease specified herein, for the purpose of enabling commercial operations within the band devoted to primary public safety broadband use. The Upper 700 MHz D Block licensee will gain access to this public safety broadband spectrum by means of a spectrum leasing arrangement with the Public Safety Broadband Licensee. We also place additional conditions regarding the use of the D Block spectrum, including a requirement that the D Block licensee provide the Public Safety Broadband Licensee with priority access to the D Block license spectrum during emergencies.

413. We disagree with commenters who assert that the Act prohibits us from adopting a plan facilitating a public/private partnership through a shared use of spectrum between the Public Safety Broadband Licensee and a commercial spectrum lessee.⁸⁸⁵ We conclude that Section 337(a)(1) does not prohibit the Public Safety Licensee from entering into the lease for commercial operations, on a limited and preemptible basis as specified herein, of spectrum that is allocated for public safety services. In addition, we find that Section 337(a)(2), which directs us to allocate 36 megahertz "for commercial use," does not prohibit us from requiring the D Block licensee to provide public safety users with priority access to D Block license spectrum in an emergency. Priority service, although provided to public safety, will still be commercial, and will not appreciably impair the D Block licensee's ability to provide commercial services to other parties.

414. *Commercial Operations in Public Safety Spectrum on a Secondary Basis.* We permit the leasing of the Upper 700 MHz Band spectrum currently allocated for public safety services to commercial providers on a secondary, unconditionally preemptible basis. As we explain below, the spectrum leasing arrangement permitted here and the conditions placed on the use of the spectrum are designed to ensure that any commercial use does not undermine the "principal purpose" of the services provided in this band "to protect the safety of life, health, or property," as required by Section 337.⁸⁸⁶

415. We find that authorizing the Public Safety Broadband Licensee to enter into the spectrum leasing arrangement in this band described in detail below is an integral element of the package of rights and responsibilities we establish in this Second Report and Order with respect to the 700 MHz Public/Private Partnership involving the Upper 700 MHz D Block license and the Public Safety Broadband Licensee. The Public Safety Broadband Licensee will be required to lease the public safety spectrum for use by the D Block licensee on a secondary basis pursuant to the requirements set forth in the NSA and established in this Second Report and Order.⁸⁸⁷ Thus, under the 700 MHz Public/Private Partnership framework that we are adopting, the D Block licensee will be obligated to construct a broadband network capable of operating on the public safety broadband spectrum for the benefit of the Public Safety Broadband Licensee, and the Public Safety Broadband Licensee will be obligated to permit secondary commercial operations on the public safety broadband spectrum pursuant to the spectrum leasing arrangement.

416. We have determined that commercial operations on a secondary, preemptible basis will

⁸⁸⁵ CTIA 700 MHz Further Notice Comments at 19; L-3 700 MHz Further Notice Comments at 10; MetroPCS 700 MHz Further Notice Comments at 10; NATOA 700 MHz Further Notice Comments at 15; New York, NY 700 MHz Further Notice Comments at 5-7; Verizon Wireless 700 MHz Further Notice Comments at 53-56; see also Sprint Nextel 700 MHz Further Notice Comments at 8 (urging the Commission to analyze these issues to ensure that a public/private partnership, if adopted, rests on firm legal footing).

⁸⁸⁶ 47 U.S.C. § 337(a)(1), (f)(1)(A).

⁸⁸⁷ We also require that this spectrum be subleased from the D Block licensee to the Operating Company through a spectrum subleasing arrangement under the Commission's rules. References in this order to the Public Safety Broadband Licensee's spectrum manager leasing arrangement with the D Block licensee also include reference, where appropriate, to this spectrum subleasing arrangement.

maximize the efficient use of the spectrum by permitting full use of the public safety broadband spectrum. Further, providing the D Block licensee with the opportunity to offer commercial services on this spectrum, on a secondary basis, is an integral part of a viable framework for enabling the 700 MHz Public/Private Partnership to finance the construction of a nationwide, interoperable public safety broadband network.⁸⁸⁸ Given that this spectrum leasing arrangement will support the build-out of a public safety network operating pursuant to the Public Safety Broadband Licensee's license, and, given the particular role of the Public Safety Broadband Licensee in ensuring that the public/private network established pursuant to the 700 MHz Public/Private Partnership serves the interests of public safety, we conclude that permitting the Public Safety Broadband Licensee to lease its spectrum for use by the D Block licensee as part of the shared broadband network best serves the public interest. The Public Safety Broadband Licensee is uniquely positioned to maximize the efficiency for public safety purposes of this spectrum and maintain the unfettered use of this spectrum for public safety service.

417. We will require that this spectrum leasing arrangement take the form of a long-term spectrum manager leasing arrangement for the full term of the license.⁸⁸⁹ This type of leasing arrangement enables a licensee to accord its spectrum lessee a significant degree of operational autonomy without relinquishing *de facto* control over the licensed spectrum. At the same time, the spectrum lessee remains ultimately responsible for ensuring that the spectrum is used in a manner that complies with the applicable regulatory and statutory requirements. By limiting the D Block licensee's secondary use of the Public Safety Broadband Licensee's spectrum to leased access under a spectrum manager leasing arrangement, subject to the conditions we are placing on the nature of that access, we thus ensure that the Public Safety Broadband Licensee has the regulatory means (and obligation) to preserve the fundamental public safety function of the band. Moreover, the Public Safety Broadband Licensee's ultimate control over the D Block licensee's use of this band, coupled with the operational flexibility accorded the D Block licensee under a spectrum manager leasing arrangement, should provide an appropriate balance between commercial and public safety operations in the public safety broadband spectrum. Specifically, the spectrum manager leasing arrangement permits the D Block licensee to construct a network to serve its business needs, yet preserves the network infrastructure required for primary public safety use in the Public Safety Broadband Licensee's band.

418. As further conditions on the spectrum leasing arrangement authorized here, the D Block licensee's commercial operations in the public safety spectrum must not cause interference to primary users (*i.e.*, public safety users) and must accept interference from primary users at all times.⁸⁹⁰ To help ensure that commercial secondary use complies with these limitations, in the public safety broadband spectrum we will require that the network be designed so as to automatically assign priority to public safety users, to the exclusion and/or immediate preemption of any commercial use on a dynamic, real-time priority basis, and that network specifications are sufficient to guarantee that public safety users suffer no harmful interference or interruption or degradation of service due to commercial operations in the public safety broadband spectrum. Commercial service should therefore operate in an effectively "invisible" manner with regard to public safety users.

⁸⁸⁸ Nothing in the Act or our rules prevents public safety entities from receiving service from commercial service providers. See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 22709, 22750 n.232 (2000) (stating that public safety entities, rather than constructing their own systems, may find it more cost-effective to contract out to a commercial service provider).

⁸⁸⁹ See 47 C.F.R. §§ 1.9010, 1.9020.

⁸⁹⁰ See Amendment Of Parts 73 And 74 Of The Commission's Rules To Establish Rules For Digital Low Power Television, Television Translator, And Television Booster Stations And To Amend Rules For Digital Class A Television Station, MB 03-185, *Report and Order*, 19 FCC Rcd 22038, ¶ 2 (2004).

419. We disagree with commenters who assert that the Act prohibits us from permitting commercial operations on a secondary basis in the 700 MHz public safety spectrum to facilitate the build-out of a public safety network.⁸⁹¹ These commenters construe Section 337(a)(1), which directs the Commission to allocate 24 megahertz of the 700 MHz spectrum “for public safety services,”⁸⁹² as requiring such spectrum to be used *exclusively* for public safety services.⁸⁹³ CTIA, for example, maintains that the Section 337 “expressly forbids” any use of the relevant 24 megahertz for commercial services.⁸⁹⁴ The statutory provision, however, includes no such limiting language. It requires neither that the 24 megahertz at issue be allocated exclusively for public safety services nor that it be used only for such services.⁸⁹⁵ Moreover, Section 337(a)(1) confers upon the Commission the authority to allocate 24 megahertz for public safety services “according to the terms and conditions established by the Commission.” We construe this phrase as affording us broad discretion to impose conditions on the use of this spectrum to effectuate its optimal use by public safety, and the condition at issue here serves just such a purpose.⁸⁹⁶ Namely, the secondary preemptible commercial use condition will harness private sector resources to facilitate the construction of a nationwide interoperable public safety broadband network for use in this spectrum, and the record in this proceeding demonstrates the pressing need for such a network.⁸⁹⁷ Furthermore, for purposes of this analysis, it is critical that this spectrum will be used primarily by public safety, and public safety will have the absolute right to preempt *any* commercial traffic on this spectrum. Thus, we conclude that permitting commercial operations in these frequencies through this spectrum leasing arrangement on a secondary preemptible basis pursuant to the plan we adopt here does not violate Section 337(a) and is in fact fully consistent with both the “plain text” and purpose of the statute.

420. In any event, even were we to construe Section 337(a)(1) to require this 24 megahertz of spectrum to be devoted exclusively to the provision of “public safety services,” we would reach the same conclusion because the definition of “public safety services” does not foreclose the secondary preemptible commercial use at issue here. The statute flexibly defines “public safety services” as services “the sole or

⁸⁹¹ CTIA 700 MHz Further Notice Comments at 19; L-3 700 MHz Further Notice Comments at 10; MetroPCS 700 MHz Further Notice Comments at 10; NATOA 700 MHz Further Notice Comments at 15; New York, NY 700 MHz Further Notice Comments at 5-7; Verizon Wireless 700 MHz Further Notice Comments at 53-56; *see also* Sprint Nextel 700 MHz Further Notice Comments at 8 (urging the Commission to analyze these issues to ensure that the public/private partnership, if adopted, rests on firm legal footing).

⁸⁹² *See* 47 U.S.C. § 337(a)(1).

⁸⁹³ *See, e.g.,* Verizon Wireless 700 MHz Further Notice Comments at 53.

⁸⁹⁴ *See* CTIA 700 MHz Further Notice Comments at 20.

⁸⁹⁵ *See* Frontline 700 MHz Further Notice Reply Comments at 25 (“Nothing in Section 337 stands in the way of allowing secondary uses that do not interfere with the 700 MHz block’s primary allocation. Not a word of the statute addresses secondary uses, and the Commission regularly allows such uses.”). To the extent that we may have previously suggested that Section 337 required that the frequencies in this allocation must be used exclusively for public safety services, *see, e.g., The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010*, First Report and Order and Third Proposed Notice of Rulemaking, 14 FCC Rcd. 152, 183 ¶ 58, we reject such a view for the reasons set forth above.

⁸⁹⁶ *See* Frontline 700 MHz Further Notice Reply Comments at 26 (“Allowing commercial secondary usage is also entirely consistent with the Commission’s wide discretion to ‘establish terms and conditions’ over public safety services under the statute.”).

⁸⁹⁷ *See id.* at 25 (“[A] public/private partnership to create a nationwide wireless broadband network that allows preemptible secondary commercial uses *expands* the ability of public safety entities to provide ‘public safety services.’”) (emphasis in original).

principal purpose of which is to protect the safety of life, health, or property,”⁸⁹⁸ which suggests that even the public safety licensee might engage in other uses of the spectrum. Authorizing secondary preemptible commercial operations does not impair or materially detract from that statutorily mandated “principal purpose.” Indeed, it furthers that purpose, as noted above, by making funds available for the construction of a nationwide broadband network that will greatly benefit public safety users.

421. Nor does Section 337(f)(1)(C), which states that “public safety services” are services that are “not made commercially available to the public by the provider,” bar the spectrum leasing arrangement under the requirements and conditions contemplated here. We construe this language to refer to retail wireless operations, rather than to wholesale activities. In particular, we understand the prohibition on “the provider” – in this case, the Public Safety Broadband Licensee – offering services “to the public” to restrict the broad offerings, accessible to the general public, that are the hallmarks of retail wireless offerings. This construction is consistent with Section 337(f)(1)(A) – that the “sole or principal purpose” of “public safety services” is to “protect the safety of life, health, or property”⁸⁹⁹ – in that it underscores Congress’s determination that public safety should be the primary mission of the public safety licensee (not operating a retail wireless business). The requirement we adopt here that the public safety licensee enter into a wholesale spectrum leasing arrangement for use by the D Block licensee – and *only* the D Block licensee – is a far cry from allowing it to engage in retail operations with respect to services that are made “commercially available to the public” at large.⁹⁰⁰

422. We do not regard this construction of Section 337 as inconsistent in any way with the Commission’s conclusion in construing similar language in a different statutory provision. In particular, in the *Non-Accounting Safeguards* proceeding, the Commission interpreted the statutory definition of “telecommunications service” – “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public”⁹⁰¹ – to encompass both retail and wholesale services.⁹⁰² The Commission based that conclusion partly on its reading of yet another statutory provision, Section 251(c)(4), which refers to both “wholesale” and “retail” offerings of telecommunications services,⁹⁰³ and on the legislative history of the definition of “telecommunications service,” which indicated that Congress intended the definition to distinguish common carrier offerings, provided to the public, from private carriage arrangements.⁹⁰⁴ We have no basis to conclude, however, that Congress intended to make a similar distinction in requiring that “public safety services” not be “made available to the public by the provider.” Congress adopted the definition of “telecommunications

⁸⁹⁸ 47 U.S.C. § 337(f)(1)(emphasis added).

⁸⁹⁹ 47 U.S.C. § 337(f)(1)(A).

⁹⁰⁰ We do not use the term “wholesale spectrum leasing arrangement” here to distinguish such a spectrum leasing agreement from any other form of leasing agreement. Rather, this term is simply used to distinguish the arrangement at issue here from the retail operations in which a public safety licensee may not engage.

⁹⁰¹ 47 U.S.C. § 153(46).

⁹⁰² Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended, CC Docket No. 96-149, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 21905, 22032-34 ¶¶ 263-265 (1996)(*Non-Accounting Safeguards Order*); Second Order on Reconsideration, 12 FCC Rcd 8653, 8670-71 ¶ 33 (1997)(*Non-Accounting Safeguards Reconsideration Order*).

⁹⁰³ 47 U.S.C. § 251(c)(4)(requiring certain carriers “to offer for resale at wholesale rates any telecommunications service that the carrier provides at retail”).

⁹⁰⁴ *Non-Accounting Safeguards Order*, 11 FCC Rcd at 22033-34 ¶¶ 264-65; see also *Non-Accounting Safeguards Reconsideration Order*, 12 FCC Rcd at 8670-71 ¶ 33.

service” as part of the Telecommunications Act of 1996,⁹⁰⁵ the primary purpose of which was to “open[] all telecommunications markets to competition.”⁹⁰⁶ Congress enacted Section 337 in 1997 for the very different purpose of directing allocation of the Upper 700 MHz Band, including the allocation of 24 megahertz to public safety. For this reason, we do not think it necessary, or even appropriate, to construe Section 337 on the basis of Congressional intent in enacting the local competition provisions of the 1996 Act.

423. Nonetheless, even if we were to read “not made commercially available to the public” to prohibit common carriage offerings by the public safety licensee, this provision does not bar the lease arrangement at issue here. The spectrum leasing arrangement, and the conditions we place on use of that spectrum, is most akin to private carriage, in that the public safety licensee does not make services “available to the public” or to such classes of eligible users as to be effectively “available to the public.”⁹⁰⁷ Under the rules we adopt today, the required lease is a *sui generis* arrangement available only to the D Block licensee according to the prescribed terms of the lease agreement between the parties.⁹⁰⁸ This limitation ensures that the Public Safety Broadband Licensee focuses its efforts on public safety, rather than on commercial operations, while nonetheless providing a source of financing that enables it to fulfill the statutory goal of enhancing public safety. We conclude, therefore, that allowing the public safety licensee to enter into a private carriage arrangement in which it leases public safety spectrum for commercial use by the D Block licensee on a secondary basis presents no conflict with Section 337(f)(1)(C).

424. We find that, in addition to being consistent with the text of Sections 337(a)(1) and 337(f), this arrangement is consistent with the intentions of Congress to provide 24 megahertz of spectrum for public safety use. The secondary use will facilitate the construction of the network that will provide public safety services while in no way impairing or limiting public safety services in the spectrum. Denying public safety the benefits of secondary use would thus work against the intent of Congress by denying public safety a means of efficiently and effectively making use of their spectrum.⁹⁰⁹ We also note that we have taken additional measures to ensure that the authorization for commercial use on a secondary basis in these frequencies does not in practice either hinder or degrade the public safety services in the spectrum. For example, we require safeguards adequate to ensure that the primary public safety services are protected from interference on an automatic basis, and we prohibit the D Block

⁹⁰⁵ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996 Act)(codified at 47 U.S.C. §§ 151 *et seq.*).

⁹⁰⁶ See Joint Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess. 1 (1996).

⁹⁰⁷ See *National Ass'n of Regulatory Util. Comm'rs v. FCC*, 525 F.2d 630 (D.C. Cir.), *cert. denied*, 425 U.S. 992 (1976)(*NARUC*)(defining common carrier as an entity that holds itself out to serve all potential users indifferently or is required by law to serve all potential users indifferently); see also 47 U.S.C. § 332(d)(1)(an entity is a commercial mobile service provider and regulated as a common carrier if it provides a mobile service “for a profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public”).

⁹⁰⁸ See *NARUC*, 525 F.2d at 641 (essential to the common carrier concept is that the carrier undertakes to carry for all people indifferently), 642 (“The common law requirement of holding oneself out to serve the public indiscriminately draws such a logical and sensible line between the two types [common and private] of carriers.”).

⁹⁰⁹ See *Cyren Call 700 MHz Further Notice Reply Comments* at 30 (arguing that “it cannot have been the intent of Congress to provide the Public Safety community with an allocation of spectrum and yet deprive it of the means to make use of that spectrum even if those means have been developed and embraced by Public Safety and the FCC”); *NPSTC 700 MHz Further Notice Reply Comments* at 5 (asserting that it would be “incongruous that a provision, directed towards ensuring a public safety allocation in the 700 MHz Band, would preclude effective use by public safety”).

licensee from discontinuing or degrading service to public safety users. Accordingly, both the text and the statutory purpose argue for allowing this secondary use.

425. Our decision to permit the Public Safety Broadband Licensee to provide the D Block licensee secondary and preemptible access to the 700 MHz public safety broadband spectrum is an integral element of the unique package of rights and responsibilities of the public/private partnership established in this Second Report and Order. Specifically, the access that we provide to the D Block licensee is based on a number of factors specific to this partnership, including: (1) the complementary requirement that the D Block licensee provide the Public Safety Broadband Licensee with priority access to the D Block license spectrum during emergencies, (2) the incorporation of the requirements set forth in this Second Report and Order as well as the terms and conditions of the NSA into the leasing arrangement, (3) the provision of a means to enable private sector resources via the 700 MHz Public/Private Partnership to finance the construction of a nationwide, interoperable public safety broadband network, in light of how the record in this proceeding demonstrates the pressing need for such a network, and (4) the mandates that the network be designed so as to assign priority to public safety users automatically, to the exclusion and/or immediate preemption of any commercial use on a dynamic, real-time priority basis, and that network specifications be sufficient to guarantee that public safety users suffer no harmful interference or interruption or degradation of service. We thus do not intend to permit any other leasing arrangements involving the 700 MHz public safety spectrum outside of the unique circumstances of the public/private partnership and the specific conditions we place upon the leasing arrangement between the Public Safety Broadband Licensee and D Block licensee.

426. *Priority Public Safety Access to Commercial Spectrum During Emergencies.* As part of its responsibilities in managing the shared wireless broadband network, we require the D Block licensee to provide the Public Safety Broadband Licensee with priority access, during emergencies, to the spectrum associated with the D Block license (in addition to the 700 MHz public safety broadband spectrum). In determining what constitutes an emergency, we agree with Frontline that the definition of an "emergency" for this purpose should be left to negotiation between the parties.⁹¹⁰ The potential disruption of commercial service in the D Block license, while wholly appropriate in an emergency situation, must nonetheless be limited to the most serious occasions.⁹¹¹ Otherwise the commercial viability of the 700 MHz Public/Private Partnership could be jeopardized. To balance these competing concerns, we require the parties to define "emergency" for purposes of priority access to D Block license spectrum as part of the NSA.

427. We expect that the terms of the NSA will ensure cooperation by the D Block licensee and the Public Safety Broadband Licensee when they are called upon to coordinate priority access to D Block license spectrum for first responders facing an emergency. Nevertheless, we recognize that there may be occasions when the parties are unable to agree that an emergency situation requires priority access to the D Block license spectrum, especially in circumstances that do not clearly fall within the definition of "emergency" negotiated by the parties in the NSA. On these occasions, the Public Safety Broadband Licensee may request that the Commission declare, on an expedited basis, that particular circumstances warrant emergency priority access. In order to facilitate this process and ensure a prompt response, we delegate authority to the Defense Commissioner to decide these requests and amend Section 0.181 of our Rules to reflect this new duty.

⁹¹⁰ Frontline Mar. 6 Comments in WT Docket No. 06-150, at 14.

⁹¹¹ These limitations shall apply to the emergency access we require here. Although we mandate that the D Block licensee allow the Public Safety Broadband Licensee to access the D Block license spectrum during emergencies, nothing in this Second Report and Order shall be construed as prohibiting the D Block licensee from otherwise offering its commercial services to the Public Safety Broadband Licensee.

428. We emphasize that this priority access to D Block license spectrum is intended to ensure that public safety entities have sufficient bandwidth for their emergency communication needs. Under emergency conditions, all public safety entities in the affected area will have real-time access, as needed, to all D Block license spectrum on a priority basis over commercial traffic and will preempt ongoing commercial traffic to the extent necessary. In this regard, we require the D Block licensee to provide appropriate warnings to its commercial customers about the potential interruption of their service during emergencies due to preemption by public safety users. The NSA should address how the D Block licensee will satisfy this obligation, including, for example, encouraging the use of devices that can access spectrum other than the D Block. The NSA must also recognize that emergency 911 calls from commercial users also play a critical role in safeguarding public safety and should be accorded some level of priority, which may be lower priority than public safety communications but will not be subject to interruption of ongoing calls by public safety users and will have priority over all other commercial uses.

429. We find that Section 337(a)(2), which directs us to allocate 36 megahertz “for commercial use,” does not prohibit us from requiring the D Block licensee to provide public safety users with priority access to D Block license spectrum in an emergency. The D Block license spectrum is still allocated for commercial use, will be used primarily to provide commercial services to the public at large, and will be assigned by competitive bidding pursuant to Section 309(j) of the Act. Although in an emergency, the priority access to network services is provided to public safety users, this service itself is a commercial service that will be provided to public safety for a fee, albeit one that is not made available to the general public and is provided according to terms specified in regulation. Further, because emergency access to commercial spectrum would be triggered only in rare circumstances, it should not hinder the licensee from operating a successful commercial service. We therefore conclude that it is not inconsistent with Congressional intent that this spectrum be used by public safety in times of emergency.

430. We also find that the D Block license is consistent with our statutory mandate to assign commercial 700 MHz Band spectrum by competitive bidding pursuant to Section 309(j) of the Act. The conditions associated with the D Block license do not alter that requirement or prevent us from offering the D Block at auction. The Commission has stated that “the relevant statutory prerequisite [for competitive bidding], as set forth in Section 309(j) of the Budget Act, is that mutually exclusive applications are accepted for filing. This standard does not require that the relevant spectrum be completely unoccupied by other services.”⁹¹² We will accept mutually exclusive applications for filing with regard to the D Block spectrum, which will be subject to auction and will be used primarily to provide commercial services to the public at large.

431. *Secondary Markets Rules.* In permitting the Public Safety Broadband Licensee to enter into this spectrum leasing arrangement subject to the conditions we set out in this order, we waive the Commission’s spectrum leasing policies and rules insofar as they prohibit public safety licensees from entering into spectrum leasing arrangements for commercial operations.⁹¹³ We determine, consistent with our proposal in the *700 MHz Public Safety Ninth Notice*,⁹¹⁴ that permitting commercial use of public safety spectrum on a secondary basis on an unconditionally interruptible basis, as part of the 700 MHz Public/Private Partnership for developing an interoperable network for public safety use, would serve the public interest.

⁹¹² Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, 10 FCC Rcd 4695, ¶ 55 (1995).

⁹¹³ See *Secondary Markets Second Report and Order*, 19 FCC at 17529-31 ¶¶ 53-56.

⁹¹⁴ *700 MHz Public Safety Ninth Notice*, 21 FCC Rcd at 14849 ¶ 44.

c. Performance Requirements

432. Background. In the *700 MHz Further Notice*, we sought comment on Frontline's proposal that the commercial licensee responsible for constructing the shared network be required to meet *the following build-out benchmarks: provide coverage to 75 percent of the United States population within four years of the 700 MHz "auction clearing date;" provide coverage to 95 percent of the United States population within seven years; and provide coverage to 98 percent of the United States population within 10 years.*⁹¹⁵ With regard to Alaska, the *700 MHz Further Notice* sought comment on Frontline's proposal that the licensee be required to provide coverage to all Alaskan cities of 10,000 or more within four years of the 700 MHz auction clearing date.⁹¹⁶

433. In comments to the *700 MHz Further Notice*, Frontline proposes that for the continental United States and Hawaii the D Block licensee be required to cover: 75 percent of the U.S. population (or equivalent geographic coverage) within four years; 95 percent of the U.S. population (or equivalent geographic coverage) within seven years; and 99 percent of the U.S. population (or equivalent geographic coverage) within ten years.⁹¹⁷ With respect to Alaska, Frontline proposes that the D Block licensee be legally obligated to providing coverage to all Alaska cities of 5,000 or more by the end of the fourth year after construction begins, and thereafter the D Block licensee should be required to work with the Alaska Land Mobile Project to formulate a plan appropriate to Alaska's unique coverage challenges.⁹¹⁸ Frontline states that these performance requirements should take effect on the later of either the date the D Block license is granted or the statutorily imposed DTV transition date of February 17, 2009.⁹¹⁹

434. In its comments, NPSTC states that it strongly encourages the Commission to mandate minimum coverage requirements of 99.3 percent of the population at year 10.⁹²⁰ NPSTC states that its 10-year population-based benchmark proposal would provide coverage to every county with a population density of five or more persons per square mile. NPSTC also thinks that it is important for the Commission to impose interim coverage benchmarks for the fourth and seventh years. NPSTC proposes interim benchmarks of 25 percent of population within four years and 95 percent of population within seven years.⁹²¹ In its July 6, 2007 *Ex Parte* filing, NPSTC revises its first interim benchmark to 75 percent of population within four years and maintains its second and third benchmark proposals of 95

⁹¹⁵ *700 MHz Further Notice*, 22 FCC Rcd at 8162 ¶ 274.

⁹¹⁶ *Id.* Frontline Mar. 26 *Ex Parte*, WT Docket No. 06-150, Attach. at 3-4 (proposed 47 C.F.R. § 27.14). Frontline specified that the "auction clearing date" "refer[ed] to the Analog Spectrum Recovery Firm Deadline provided for in Section 3002 of the Deficit Reduction Act of 2005." *Id.*

⁹¹⁷ Frontline *700 MHz Further Notice* Comments at 40-41; *see also* Frontline *700 MHz Further Notice* Reply Comments at 19. Frontline stated that, if the Commission chooses a geographic based build-out requirement, the obligation should include coverage of Indian lands, but not federal lands. Frontline also indicated that, if the Commission chooses a population-based coverage requirement, the D Block licensee should be required to work with the adjacent public safety band licensee where public safety coverage needs might diverge from the goal of maximizing population coverage. *See* Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 96-86 and 06-150 and PS Docket No. 06-229 at 7-8.

⁹¹⁸ Frontline *700 MHz Further Notice* Comments at 41. We note that, in its filings prior to the *700 MHz Further Notice*, Frontline's proposed build-out rule for Alaska would have covered only Alaskan cities of 10,000 or more by the end of the fourth year. *See* Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 96-86 and 06-150 and PS Docket No. 06-229 at 8.

⁹¹⁹ *See* Frontline *700 MHz Further Notice* Comments at 40-41; *see also* Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 96-86 and 06-150 and PS Docket No. 06-229 (proposed rule modifications).

⁹²⁰ NPSTC *700 MHz Further Notice* Comments at 12-13.

⁹²¹ *Id.*

percent of population within seven years and 99.3 percent of population in 10 years.⁹²² NPSTC also states in its *Ex Parte* that it would support additional requirements to ensure coverage for isolated population centers, and anticipates the use of satellite technologies to provide coverage to remote areas.

435. APCO, the International Association of Chiefs of Police (IACP), the International Association of Fire Chiefs (IAFC), and California state that they support the population-based benchmark proposal outlined in NPSTC's comments.⁹²³ APCO, IACP and IAFC also call for coverage for major highways and interstates, as well as "such additional areas that are necessary to provide coverage for all incorporated communities with a population in excess of 3,000, unless the national public safety license and commercial licensee jointly determine, in consultation with a relevant community, that such additional coverage will not provide significant public benefit."⁹²⁴ Cyren Call proposes 50 percent population coverage at four years, 80 percent population coverage at seven years, and 99 percent population coverage at 10 years.⁹²⁵ RCC argues that the Commission should impose a geographic coverage requirement because public safety has coverage needs in low or zero population areas.⁹²⁶ NENA argues that the Commission should impose a mix of population- and geographic-based performance requirements.⁹²⁷ AT&T argues that in addition to a population- or geographic-based build-out requirement, the Commission should impose a public safety loading or participation requirement.⁹²⁸

436. Embarq argues that the Commission should adopt stringent build-out requirements in both urban and rural markets.⁹²⁹ Northrop Grumman urges the Commission to permit flexibility to allow interim deployment of local or regional broadband networks by public safety entities in areas where the national broadband network build out will not occur in the near term.⁹³⁰ Region 9 (Florida), Region 14 (Indiana), and Region 16 (Kansas) express concern that the proposed build-out schedule would result in long delays before public safety will be able to access the system, especially in rural areas.⁹³¹ With respect to the date when the performance requirements should begin to take effect, Embarq notes that any build-out requirements that the Commission imposes must recognize that band clearing will not occur until the DTV transition is completed on February 17, 2009.⁹³²

437. Discussion. We adopt specific performance requirements that include three population-based build-out benchmarks that cover the nationwide D Block license area.⁹³³ Specifically, we will

⁹²² NPSTC 700 MHz *Further Notice Ex Parte* at 2 (filed July 6, 2007).

⁹²³ APCO 700 MHz *Further Notice* Comments at 18; California 700 MHz *Further Notice* Reply Comments at 4; NPSTC 700 MHz *Further Notice* Comments at 12; APCO, IACP and IAFC 700 MHz *Further Notice Ex Parte* (filed July 13, 2007); *see also* TIA 700 MHz *Further Notice* Comments at 4-5.

⁹²⁴ APCO, IACP and IAFC 700 MHz *Further Notice Ex Parte* (filed July 13, 2007).

⁹²⁵ Cyren Call 700 MHz *Further Notice* Comments at 21.

⁹²⁶ RCC 700 MHz *Further Notice* Comments at 60; *see also* MetroPCS 700 MHz *Further Notice* Comments at 64; MetroPCS 700 MHz *Further Notice* Reply Comments at 49.

⁹²⁷ NENA 700 MHz *Further Notice* Comments at 4.

⁹²⁸ AT&T 700 MHz *Further Notice* Reply Comments at 24.

⁹²⁹ Embarq 700 MHz *Further Notice* Comments at 5.

⁹³⁰ Northrop Grumman 700 MHz *Further Notice* Comments at 5.

⁹³¹ Region 9 (Florida) 700 MHz *Further Notice* Comments at 3; Region 14 (Indiana) 700 MHz *Further Notice* Comments at 2; Region 16 (Kansas) 700 MHz *Further Notice* Comments at 3.

⁹³² Embarq 700 MHz *Further Notice* Comments at 5 n.3.

⁹³³ The nationwide D Block license area is composed of the contiguous 48 states, Alaska, Hawaii, the Gulf of Mexico, and the U.S. territories.

require the D Block licensee to provide signal coverage and offer service to at least 75 percent of the population of the nationwide D Block license area by the end of the fourth year, 95 percent of the population of the nationwide license area by the end of the seventh year, and 99.3 percent of the population of the nationwide license area by the end of the tenth year. To meet these requirements, the D Block licensee must use the most recently available U.S. Census Data. We conclude that the build-out requirements we impose will ensure that public safety needs are met.

438. While commercial providers typically focus exclusively on building out high population areas, we recognize that the needs of first responders are also important in smaller towns and rural areas. In order to ensure that less populous areas are not neglected in the D Block licensee's build-out efforts, we adopt certain additional measures to encourage coverage in those areas.⁹³⁴ Accordingly, as discussed elsewhere, we require that the D Block licensee meet our initial population benchmarks based on a build-out schedule specified in the NSA consistent with the public safety needs.⁹³⁵ We also require the D Block licensee to offer at least one handset suitable for public safety use that includes an integrated satellite solution pursuant to the terms, conditions, and timeframes set forth in the NSA. These additional requirements will facilitate coverage to rural and zero population areas if the public safety users need such coverage.⁹³⁶ Imposing specific build-out requirements through the NSA provisions will ensure that the D Block licensee's performance requirements are responsive to the public safety needs.

439. Our three population-based construction benchmarks will take effect beginning on February 17, 2009.⁹³⁷ This is the statutorily imposed DTV transition date and is the same date that build-out obligations for the other unauctioned commercial 700 MHz Band licensees begin to take effect.⁹³⁸ Thus, our four, seven, and ten year construction benchmarks for the D Block licensee will be calculated as starting from February 17, 2009. Use of this date provides regulatory parity and it recognizes that the DTV transition will not be completed until this date.⁹³⁹ As a result, using the February 17, 2009 date will provide regulatory certainty, promote build-out of the shared network associated with the Public Safety Broadband License, and foster development of the public safety broadband network. We note that the D Block licensee may begin constructing its system prior to February 17, 2009, and may begin operating its system prior to that date so long as it provides appropriate interference protection to incumbent co-channel and adjacent channel broadcasters.⁹⁴⁰

⁹³⁴ See NPSTC 700 MHz Further Notice Ex Parte at 2 (filed July 6, 2007) (requesting that in addition to three population-based build-out benchmarks, the Commission should also adopt certain additional requirements to ensure coverage to isolated population centers).

⁹³⁵ See "Network Sharing Agreement (NSA) and Mandatory Provisions," *supra*.

⁹³⁶ Given these measures, the stringency of our population-based requirements, and the requirement we impose elsewhere that the build-out schedule established in the NSA may not satisfy the initial benchmarks exclusively through build-out of high population areas, we do not impose any additional requirements with regard to build-out in Alaska specifically.

⁹³⁷ As discussed elsewhere, we adopt that the D Block license term must not exceed 10 years from February 17, 2009.

⁹³⁸ See 700 MHz Report and Order, 22 FCC Rcd at 8095 ¶ 82.

⁹³⁹ See Mid-Size ILECs 700 MHz Further Notice Comments at 5 n.3.

⁹⁴⁰ Such interference protection will be provided through compliance with the provisions of Section 27.60 of the Commission's rules. 47 C.F.R. § 27.60. Furthermore, certain B Block licensees will continue to be authorized to operate in the 762-764 and 792-794 MHz bands, which overlap portions of the 758-763 and 788-793 MHz D blocks. The D Block licensee will therefore be required to provide appropriate co-channel protection to those B Block licensees by limiting its base station field strength signal levels to no greater than 40 dBu at the B Block licensees' geographic borders.

440. The Commission will apply the three population-based construction benchmarks over the nationwide D Block license area. Accordingly, the D Block licensee must employ a signal level sufficient to provide adequate service to the relevant percentage of the population over the nationwide D Block license area.⁹⁴¹ Moreover, we require that the network and signal levels employed to meet these benchmarks be adequate for public safety use, as defined in the *Shared Wireless Broadband Network* subsection herein and further defined by the NSA, and that the services made available be appropriate for public safety entities in those areas. In particular, as discussed below, we require as a mandatory provision of the NSA that the D Block licensee and Public Safety Broadband Licensee negotiate inclusion into the build-out schedule coverage of major highways and interstates, as well as incorporated communities with a population in excess of 3,000, as suggested by APCO, IACP and IAFC.⁹⁴² In addition, to the extent that the D Block licensee chooses to provide commercial services to population levels in excess of the relevant benchmarks, the D Block licensee will be required to make the same level of service available to public safety entities.

441. The three population-based construction benchmarks that we adopt for the D Block licensee are clear, provide specific deadlines and quantifiable levels of service and, as a result, will provide the D Block licensee with regulatory certainty regarding the applicable construction requirements. We agree with those commenters who stress that the build-out requirements for the D Block licensee must be stringent and unambiguous.⁹⁴³ The requirements that we are adopting are more stringent than those that we are imposing on other 700 MHz commercial licensees and are consistent with our goal of developing a nationwide broadband public safety network. In addition, use of population-based benchmarks is consistent with public safety comments, and ultimately the national interoperable broadband public safety network will be built to serve the public safety needs of over 99 percent of the population.⁹⁴⁴

442. Moreover, by adopting interim benchmarks, we ensure that the D Block licensee is in a position to begin providing service to the Public Safety Broadband Licensee well in advance of the end of its license term. We also provide sufficient time for new advanced technologies to develop and be placed in service by the D Block licensee by setting the first benchmark at four years. These benchmarks for the D Block licensee balance the need to quickly develop the public safety communication system with the need to allow sufficient time for new and innovative wireless broadband technologies to develop. Our benchmarks, therefore, are consistent with our goal of establishing a national interoperable public safety network that will provide state-of-the-art service to the Public Safety Broadband Licensee.

443. In certain limited circumstances, we will permit the D Block licensee to modify these population-based construction benchmarks where the D Block licensee and the Public Safety Broadband Licensee reach agreement and the full Commission gives its prior approval for a modification. This approach will allow a certain limited degree of flexibility to meet commercial and public safety needs where those needs may deviate from our adopted construction benchmarks. As with other commercial

⁹⁴¹ See *NENA 700 MHz Further Notice Comments* at 3.

⁹⁴² APCO, IACP and IAFC *700 MHz Further Notice Ex Parte* (filed July 13, 2007).

⁹⁴³ See *APCO 700 MHz Further Notice Comments* at 18; *Cyren Call 700 MHz Further Notice Comments* at 20; *Embarq 700 MHz Further Notice Comments* at 5; *Northrop Grumman 700 MHz Further Notice Comments* at 5; *NPSTC 700 MHz Further Notice Comments* at 12; *RCC 700 MHz Further Notice Comments* at 60; *TIA 700 MHz Further Notice Comments* at 4; *Union 700 MHz Further Notice Comments* at 16.

⁹⁴⁴ See, e.g., *APCO 700 MHz Further Notice Comments* at 18; *Embarq 700 MHz Further Notice Comments* at 5; *MetroPCS 700 MHz Further Notice Comments* at 64; *NENA 700 MHz Further Notice Comments* at 4; *NPSTC 700 MHz Further Notice Comments* at 12; *RCC 700 MHz Further Notice Comments* at 60; *California 700 MHz Further Notice Reply Comments* at 4.

700 MHz Band licensees, the D Block licensee will be required to demonstrate compliance with our adopted benchmarks by filing with the Commission within 15 days of passage of the relevant benchmarks a construction notification comprised of maps and other supporting documents certifying that they have met our performance requirements.⁹⁴⁵ *The construction notification, including the coverage maps and supporting documents, must be truthful and accurate and not omit material information that is necessary for the Commission to make a determination of compliance with our performance requirements.*⁹⁴⁶ However, unlike the other commercial licenses and because of the nature of the partnership established herein, the D Block licensee will not be subject to a "keep-what-you-use" rule. Rather, the Commission will strictly enforce these build-out requirements and, if the D Block licensee fails to meet a construction benchmark, the Commission may cancel its license, depending on the circumstances.⁹⁴⁷

d. Network Sharing Agreement (NSA) and Mandatory Provisions

444. Background. Commenters responding to our request for comment on the Frontline proposal agree that the details of any public/private partnership should be set forth in a network sharing agreement, but they disagree on the extent to which these details should also be specified in our rules as opposed to being left to negotiation.

445. In its comments, Frontline argues that the Commission should establish a "regulatory framework" that leaves most details, including the rates that the commercial licensee could charge, to be worked out in negotiation, and it argues that its proposed rules provide a framework with an appropriate level of specificity.⁹⁴⁸ Other commenters argue that the Frontline proposal is not sufficiently specific, either because it leaves public safety vulnerable to an agreement with unreasonable terms or rates or because it fails to give sufficient notice to bidders of their prospective obligations as the commercial licensee.⁹⁴⁹ Commenters also present varied suggestions for the elements that the parties should be required to address in a network sharing agreement.⁹⁵⁰ At the same time, some commenters also agree with Frontline that the rules should not be too specific.⁹⁵¹

446. Discussion. We establish that the relationship between the Public Safety Broadband Licensee and the D Block licensee will be governed by the Network Sharing Agreement (NSA) to be negotiated by the parties and such other separate agreements as the Commission may require or allow, and we provide that compliance with the terms of the NSA shall be a regulatory condition of the D Block

⁹⁴⁵ See 47 C.F.R. § 1.946(d) ("The notification must be filed with Commission within 15 days of the expiration of the applicable construction or coverage period.").

⁹⁴⁶ See, e.g., 47 C.F.R. § 1.17 (Truthful and accurate statements to the Commission); 47 C.F.R. § 1.917 ("Willful false statements made therein, however, are punishable by fine and imprisonment, 18 U.S.C. 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to 312(a)(1) of the Communications Act of 1934, as amended.").

⁹⁴⁷ Below we discuss conditions, requirements, and procedures that are intended to prevent or address breaches of obligations by the D Block licensee under either the Commission's rules or the NSA.

⁹⁴⁸ See Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 06-150 and 06-169 and PS Docket No. 06-229, at 6-8.

⁹⁴⁹ See, e.g., Alltel 700 MHz *Further Notice* Comments at 6-7.

⁹⁵⁰ See, e.g., AT&T 700 MHz *Further Notice* Comments at 13 (to give bidders greater clarity, adoption of Frontline proposal should include "specification of the primary terms and conditions that would have to be part of a Network Service Agreement . . . as well as penalties or sanctions to be imposed for failure to meet these terms and conditions."); Cyren Call 700 MHz *Further Notice* Comments at 22 (listing 17 elements to be included in NSA).

⁹⁵¹ See Cyren Call 700 MHz *Further Notice* Comments at n.22 (overly specific rules would "require potentially costly and time-consuming waiver requests should the parties agree to an arrangement that is not contemplated expressly in the FCC's regulations.").

license. Breach of this licensing condition may, at the determination of the Commission, result in remedies including, but not limited to, cancellation and subsequent award of the license.⁹⁵² Elsewhere in this Second Report and Order, we also establish certain specific rules to govern the process for cancellation and re-awarding of the D Block license to ensure that there is no discontinuation of service to public safety entities. We also identify elsewhere the potential remedies should the Public Safety Broadband Licensee fail in a substantial way to meet its obligations under the NSA or any of the Commission's rules or requirements under this Second Report and Order.

447. We require all the parties to negotiate in good faith,⁹⁵³ and we find that many of the details of their agreement are appropriately left to them to negotiate and reach agreement on (subject to ultimate Commission approval of the NSA). In the discussion that follows, however, we identify certain elements that we require the parties to address in the NSA. Primarily, we require the parties to incorporate the rights and responsibilities governing the Public/Private Partnership that we have enumerated and discussed in this Second Report and Order. We also require the NSA to include or address certain additional terms and subjects, however. These terms and subjects, together with the rules that we have detailed elsewhere, will ensure that the Public/Private Partnership serves the public interest. In addition, it will help potential bidders on the D Block license in understanding their obligations prior to auction, and will assist the parties in reaching agreement on the NSA.

448. *Rights and Obligations Under the Public/Private Partnership.* The NSA must incorporate all of the substantive rights and obligations of the parties that we have established in this Second Report and Order that are relevant to the Public/Private Partnership. Thus, for example, the NSA must incorporate the mandatory network specifications we have established elsewhere in this Second Report and Order, including the technical specifications, terms, and conditions that will ensure that public safety users are provided priority access to public safety broadband spectrum on a dynamic, real-time basis. Once the NSA is approved by the Commission and executed by the parties,⁹⁵⁴ assuming all other licensing requirements are met, the Commission will grant the D Block license to the winning bidder and compliance with the terms and conditions of the NSA will be license conditions for both the D Block license and the Public Safety Broadband License.⁹⁵⁵ As discussed elsewhere, we require the parties to submit an executed NSA within 10 business days of the Commission's approval of the agreement, and we provide that the D Block license will not be granted until such submission.

449. *Term of Agreement.* The NSA must have a term not to exceed 10 years from February 17, 2009, which coincides with the term of the D Block license established elsewhere in this Second Report and Order. At the conclusion of the initial, and subsequent, term of the agreement, the NSA may be renewed along with the D Block license, subject to Commission approval. We find it appropriate to ensure that consideration of whether to renew the D Block license and whether to renew or modify the NSA whose performance is a condition of that license should occur at the same time.

450. *Service Fees.* We find that all service fees for public safety service should be specified in the NSA, including any applicable fees for normal network service and fees for priority access to the D

⁹⁵² See also 47 C.F.R. §§ 1.903(b) ("The holding of an authorization does not create any rights beyond the terms, conditions and period specified in the authorization."), 1.945(e) ("The FCC may grant applications . . . subject to conditions other than those normally applied to authorizations of the same type.").

⁹⁵³ As discussed elsewhere, the Public Safety Broadband Licensee has the responsibility to negotiate an NSA with the winning bidder on the D Block license for broadband service in the 700 MHz public safety broadband spectrum.

⁹⁵⁴ All of the parties, including the winning bidder of the D Block license, the bankruptcy-remote entity to be the D Block licensee, the Network Assets Holder, and the Operating Company, must execute the NSA.

⁹⁵⁵ Except as specified herein, current rules and remedies under the Commission's general rules regarding violation of license terms and conditions would continue to apply.

Block in an emergency.⁹⁵⁶ We find that the parties should be left to negotiate reasonable rates in good faith, taking into account all appropriate factors, including but not limited to the public/private nature of the partnership. We expect, however, that the parties will negotiate a fee structure for priority access to the D Block in an emergency that will protect public safety users from incurring unforeseen (and unbudgeted) payment obligations in the event that a serious emergency necessitates preemption for a sustained period. We also encourage the parties to negotiate a fee agreement that incorporates financial incentives for the commercial licensee based on the number of public safety entities and localities that subscribe to the service.

451. We note that, for the negotiation of reasonable rates, typical commercial rates for analogous services may be useful as a guide.⁹⁵⁷ We believe, however, that the negotiated rates will in fact be lower than typical commercial rates for analogous services. One of the anticipated benefits that has persuaded us to establish a D Block license is that only a small portion, if any, of the initial construction costs will be recovered through public safety charges.⁹⁵⁸ Further, we expect that fees will be such that public safety entities are able to afford the services that they require for their public safety functions.

452. We emphasize that the entity winning the D Block license is accepting a critical public responsibility, providing 700 MHz broadband network service to the nation's local and state public safety entities.⁹⁵⁹ Therefore, when negotiating fees, we expect that the D Block licensee will provide public safety with the terms that will best serve the public interest goals established in this Second Report and Order regarding the public/private partnership. Further, we have established various remedies available to resolve disputes over NSA terms, and that, if necessary, we can exercise one of these options to ensure that fees charged are reasonable.

453. *Detailed Build-Out Schedule.* The NSA must include a detailed build-out schedule that is consistent with the mandatory national build-out and performance benchmarks that we have established for the D Block licensee elsewhere in this Second Report and Order. We expect the NSA to identify the specific areas of the country that will be built out by each of the construction deadlines that we have established. While commercial providers typically focus on population centers first, the needs of first responders are also important in less populous areas. Because we must ensure that smaller towns and rural areas are not neglected in the D Block licensee's build-out efforts, we require the D Block licensee to meet our initial population benchmarks by not exclusively concentrating on building out high population areas. In this regard, we agree with public safety commenters to the extent that we require the parties to include in the NSA coverage for major highways and interstates, as well as such additional areas that are necessary to provide coverage for all incorporated communities with a population in excess of 3,000, unless the Public Safety Broadband Licensee and the D Block licensee jointly determine, in consultation with a relevant community, that such additional coverage will not provide significant public benefit. We also require an estimated cost for each specified area of the build-out, which will assist us in efforts to ensure that the build-out schedule is achieved.

454. *Modifications to the NSA.* We obligate the parties to act in good faith in all dealings with

⁹⁵⁶ Frontline 700 MHz Public Safety Ninth Notice Comments at 27-28.

⁹⁵⁷ Frontline 700 MHz Further Notice Comments at 46.

⁹⁵⁸ For example, Frontline's original proposal emphasized that its network service fees on the Public Safety Broadband Licensee for managing, operating, and upgrading the network "would be much lower than the public safety spectrum usage fee under the 700 MHz Public Safety Ninth Notice's proposal because, under [Frontline's proposal,] public safety would not be funding the up-front costs of constructing the nationwide infrastructure...." Frontline 700 MHz Public Safety Ninth Notice Comments at 27.

⁹⁵⁹ See NPSTC 700 MHz Further Notice Reply Comments at 6 ("The E Block licensee should view its obligations to the public safety network as a trust responsibility that the Commission will oversee and enforce.").

each other and to abide by the terms of the agreement. The NSA must specify that any major modifications to the terms of the NSA, *related agreements or documents*, or such other agreements as the Commission may require or allow, require not only the agreement of the parties, but also prior *Commission approval*. All other modifications require prior approval by the Chiefs of the Wireless Bureau and the Public Safety and Homeland Security Bureau on delegated authority.

e. License Term and Renewal Expectancy for the Public/Private Partnership

455. Background. In the *700 MHz Report and Order*, we adopted a 10 year license term for initial authorization in the 700 MHz Commercial Service Band, subject to a subsequent renewal expectancy of 10 years.⁹⁶⁰ In the *700 MHz Further Notice*, we noted that Frontline proposed that the term of the D Block license would be for 15 years, and would be subject to a renewal expectancy upon the completion of "substantial service."⁹⁶¹ Frontline contends that given the aggressive build-out requirements for the license and the size of the investments required, a substantial license term is appropriate, particularly since a shorter license term could substantially deter auction participation.⁹⁶²

456. In response to the *700 MHz Further Notice*, NENA comments that it would support a 10-year license term, coinciding with the substantial completion of the proposed build-out requirements.⁹⁶³ NENA also argues that the licensee's success in meeting its build-out requirements should be a substantial factor in any decision to renew the national D Block license.⁹⁶⁴ Regarding the renewal criteria, Cyren Call suggests that, as part of the Commission's new renewal procedures for the D Block license, the Commission solicit the viewpoints of the Public Safety Broadband Licensee and Public Safety network users.⁹⁶⁵ Cyren Call argues that doing so would provide an additional source of motivation for the commercial operator to take steps beyond those required for mere minimum satisfaction of its contractual obligation.⁹⁶⁶

457. Discussion. Consistent with the decision made for other commercial licensees in the *700 MHz Report and Order*, we decide that a term not to exceed 10 years from February 17, 2009, should be used for initial authorization in the D Block license. The D Block license would be auctioned as a single, nationwide license to provide for commercial service in the "D Block," and to build and operate a joint broadband public safety and commercial network for public safety use. Considering the specific build-out requirements adopted for this license, we find that a 10-year license term is appropriate to secure the long-term financial commitment and the reliable public safety services. It will provide regulatory parity by establishing the same license term for the all 700 MHz licensees, and we find that Frontline has provided no persuasive reason to grant the D Block licensee a term 5 years longer than other commercial licensees. In particular, we do not believe that the 10 year term will have a significantly different impact on bidding than a 15 year term.

458. At the end of the 10 year term, the D Block licensee will be allowed to apply for license renewal, although its renewal will be subject to its success in meeting the material requirements set forth

⁹⁶⁰ *700 MHz Report and Order*, 22 FCC Rcd at 8092-94 ¶¶ 73-77, 8095-96 ¶¶ 82-84.

⁹⁶¹ *700 MHz Further Notice*, 22 FCC Rcd at 8162-63 ¶ 275.

⁹⁶² See Frontline Mar. 6 Comments in WT Docket No. 06-150 at 19.

⁹⁶³ NENA *700 MHz Further Notice* Comments at 4.

⁹⁶⁴ *Id.*

⁹⁶⁵ Cyren Call *700 MHz Further Notice* Comments at 17 (citing *700 MHz Report and Order*, 22 FCC Rcd at 8092-94 ¶¶ 73-79).

⁹⁶⁶ *Id.*

in the NSA as well as all other license conditions, including meeting the performance benchmark requirements. Because the initial NSA term will expire at the same time, the D Block licensee must also file a renewed or modified NSA for Commission approval at the time of its license renewal application. Given these detailed license renewal requirements, we decline to impose a separate substantial service showing. Considering the public safety community's concern over the success of the D Block license, we *believe that the Commission's new renewal procedure for this band should motivate the commercial operator to provide service to public safety users at a level and quality beyond the minimum necessary to satisfy its obligations under the NSA.*⁹⁶⁷

459. The material requirements set forth in the NSA, as discussed elsewhere, are conditions of the D Block license, including the network build-out schedule and satisfaction of the agreed-upon public safety specifications regarding the network construction and operations, in order to obtain a renewal of the license. Regarding the D Block license renewal application, we find the material requirements in the NSA to be those requirements that are the "essence" of the agreement between the parties, including but not limited to the build-out schedule for the public safety network and other provisions that serve the fundamental purpose of the NSA, as well as any time limits on the performance of those provisions.

f. Public Safety Satellite Support

460. Background. In the *700 MHz Public Safety Ninth Notice*, we stated that "[s]urvivability is an important objective of the envisioned nationwide public safety broadband system."⁹⁶⁸ We further observed that a network could be made "inherently robust by incorporating flexible routing and other features (possibly including a satellite component operating in other spectrum) that will maintain essential operations when parts of the infrastructure have been destroyed or disabled."⁹⁶⁹ We tentatively found that these considerations argued in favor of establishing a single national public safety broadband licensee. "[A] single national licensee may be in a better position to ensure robustness and survivability," the Commission stated, in part because it could be "well-situated to contract for national satellite service and benefit from economies of scale in integrating satellite capability into its radios to the extent that such integration is beneficial."⁹⁷⁰

461. In its filings on which we sought comment, Frontline also briefly discussed the potential of satellite communications to enhance the coverage or robustness of a network. Frontline asserted that the commercial licensee and the public safety broadband licensee "could also work with Mobile Satellite Service licensees to provide satellite coverage to cover gaps in rural areas in the terrestrial 700 MHz public safety broadband network."⁹⁷¹ Frontline proposed no obligations for the commercial licensee with regard to satellite support, however, except that, after the fourth year of build-out (by which time, Frontline proposed, coverage would be provided to all Alaskan cities of 10,000 or more), the commercial licensee would "work with the Alaska Land Mobile Project to determine where additional coverage [in Alaska] is needed and feasible, taking various factors into account including the availability of satellite services."⁹⁷²

462. In the *700 MHz Further Notice*, we sought comment on whether, if the Frontline proposal were adopted, some or all public safety equipment operating on the commercial licensee's network, including handsets and other mobile or fixed receivers, should be required to be capable of accessing

⁹⁶⁷ *Id.*

⁹⁶⁸ *700 MHz Public Safety Ninth Notice*, 21 FCC Rcd at 14843 ¶ 17.

⁹⁶⁹ *Id.*

⁹⁷⁰ *Id.*, 21 FCC Rcd at 14844 ¶ 26.

⁹⁷¹ See Frontline *700 MHz Public Safety Ninth Notice* Comments at 31 n.55.

⁹⁷² Frontline Mar. 26 *Ex Parte* in WT Docket No. 06-150 and 06-169 and PS Docket No. 06-229, at 8.

satellite communications, and whether the Commission should require the commercial licensee to incorporate satellite-based technology into its network infrastructure.⁹⁷³ Comments filed in response to this inquiry generally favor making satellite technology available for public safety users. SIA urges the Commission to “(i) make a reasonable effort to ensure that as many 700 MHz public safety devices as possible have the capability to access a satellite system; and (ii) facilitate the incorporation of satellite-based infrastructure into any 700 MHz public safety network as a backup to terrestrial network infrastructure.”⁹⁷⁴ A number of commenters supporting the creation of a national public safety broadband network argue that a satellite overlay is necessary to cover rural and remote areas effectively.⁹⁷⁵ MSV proposes that all equipment should be required to have an embedded chipset, making it possible to access satellite systems.⁹⁷⁶ MSV’s proposal receives conditional support from APCO, which suggests that the Public Safety Broadband Licensee could explore the viability of imposing such a requirement.⁹⁷⁷ Iridium urges the Commission to “require satellite back-up for public safety applications” without mandating a specific technology.⁹⁷⁸ Iridium further advocates that the Commission “should allow public safety to select from the broadest range of technology to suit their needs” by encouraging the “use of seamlessly integrated technology in both the terrestrial 700 MHz public safety spectrum as well as one or more bands in which satellite systems operate.”⁹⁷⁹ Some public safety organizations, however, emphasize the need for public safety to have access to commercial off-the-shelf equipment, rather than imposing specific equipment mandates, and advocate flexibility in infrastructure requirements to facilitate cost-effective build-out of a national, interoperable network for public safety users in a Public/Private Partnership.⁹⁸⁰

463. Discussion. We agree with commenters that satellite service can be a valuable component of a public safety communications network. Satellite technology can provide the only means of communicating where terrestrial communications networks have been damaged or destroyed by wide-

⁹⁷³ See *700 MHz Further Notice*, 22 FCC Rcd at 8165 ¶ 280.

⁹⁷⁴ SIA Comments in WT Docket No. 06-169, PS Docket No. 06-229, WT Docket No. 96-86, at 2, 7, 13 (suggesting that by incorporating satellite services into the network infrastructure, public safety would have access to ubiquitous, advanced broadband communications capability, capable of providing a robust back-up system in case of terrestrial network failure); see also MSV *700 MHz Further Notice* Comments at 7 (advocating that the Commission “require all terminals on the 700 MHz public safety broadband network to have the capability of providing mobile service by satellite by 2010”).

⁹⁷⁵ See, e.g., Fire Fighters Idaho *700 MHz Further Notice* Comments at 2; Fire Fighters Montana *700 MHz Further Notice* Comments at 2; Fire Fighters Oregon *700 MHz Further Notice* Comments at 2; Fire Fighters Mass. *700 MHz Further Notice* Comments at 2; Police Chiefs Mass. *700 MHz Further Notice* Comments, at 2 (all stating that a satellite overlay is necessary); but see Verizon Wireless *700 MHz Further Notice* Comments at 33, n. 76 (noting that satellite service already is present in 90 percent of all U.S. zip codes, citing High-Speed Services for Internet Access: Status as of June 30, 2006, Industry Analysis and Technology Division, Wireline Competition Bureau, at 2-3 (Jan. 2007) available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.pdf).

⁹⁷⁶ MSV *700 MHz Further Notice* Comments at 7.

⁹⁷⁷ APCO *700 MHz Further Notice Reply* Comments at 6.

⁹⁷⁸ Letter from Gregg L. Elias, Counsel to Iridium, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 06-150 (filed July 2, 2007) (Iridium *Ex Parte* Letter).

⁹⁷⁹ Letter from Gregg L. Elias, Counsel to Iridium, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 06-229, WT Docket No. 96-86 (filed July 24, 2007) (Iridium July 24 *Ex Parte* Letter).

⁹⁸⁰ See, e.g., Missouri Highway Patrol *700 MHz Further Notice* Comments at 9, at 25, 35 (deployment can be less expensive by using COTS and existing network infrastructure where possible); see also NATOA *700 MHz Further Notice* Comments at 14 (when specifying the security and network interface requirements for equipment operating in an open access environment it will be important to consult public safety and to ensure that no particular manufacturer is inadvertently favored).

scale natural or man-made disasters. As the Katrina Report found, “[s]atellite networks appeared to be the communications services least disrupted by Hurricane Katrina. [B]oth fixed and mobile satellite systems provided a functional, alternative communications path for those in the storm-ravaged region.”⁹⁸¹ In this regard, satellite service providers Iridium and MSV both reported substantial increases in the use of their services in and around New Orleans in the wake of Hurricane Katrina.⁹⁸² Satellite services also can enable public safety users to communicate in rural and remote areas that terrestrial services do not reach.⁹⁸³ For example, even under the aggressive performance requirements we impose herein on the D Block licensee, there will remain a number of geographic areas without coverage for a number of years. As a result, the availability of satellite-based communications capabilities would serve to bolster the availability, robustness, and survivability of public safety communications networks, particularly in circumstances of the direst nature where the safety and security of Americans are greatly at stake. For these reasons, we believe that it is appropriate for us to strongly encourage and facilitate the incorporation of satellite-based communications capability into public safety networks. At the same time, we must ensure that any action we take in this regard does not unduly burden either public safety users or the D Block licensee.

464. Accordingly, we require that the D Block licensee make available to public safety users at least one handset that includes a seamlessly integrated satellite solution. We do not require that this handset use any specific technology, only that it be capable of operating both on the 700 MHz public safety spectrum and on the satellite frequency bands and/or systems of the satellite service providers with which the Public Safety Broadband Licensee has contracted for satellite service. We do not, however, require that the D Block licensee incorporate support for satellite communications into the infrastructure of the shared terrestrial network.

465. The record indicates that handsets with seamlessly integrated satellite solutions are already under development by some equipment vendors, and that the incremental cost of incorporating satellite capability into terrestrial handsets may be relatively small.⁹⁸⁴ We find that this obligation will provide incentives for competitive development of handsets with various types of seamlessly integrated satellite capabilities, and potentially lead to affordable equipment and service costs for the public safety community. In addition, we expect that the D Block licensee may find that some consumer segments would find value in handsets with satellite capability. Public safety users, meanwhile, will be able to realize the advantages of satellite-capable handsets if they choose, but would be under no obligation to purchase them.

466. We expect that the D Block licensee, satellite companies, and handset manufacturers will take steps to facilitate the development of handsets with seamlessly integrated satellite solutions. Nevertheless, we understand that handsets offering an integrated satellite solution are not yet available, and that the development will take time. It would also be counterproductive for the D Block licensee to offer a handset with an integrated satellite solution that is incompatible with the satellite solutions ultimately adopted by the Public Safety Broadband Licensee. For these reasons, we do not establish an immediate obligation upon the D Block licensee to make satellite-capable handsets available. Rather, we will require the D Block licensee to begin offering at least one handset suitable for public safety use that includes a seamlessly integrated satellite solution pursuant to the terms, conditions, and timeframes set

⁹⁸¹ Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, *Report and Recommendations to the Federal Communications Commission* at 10-11; see also *id.* at 24 (“satellite infrastructure was generally unaffected by the storm and could have provided a viable back-up system.”).

⁹⁸² See Iridium *Ex Parte* Letter at 13; MSV 700 MHz *Further Notice* Comments at 5-6.

⁹⁸³ See APCO 700 MHz *Further Notice* Reply Comment at 6; SIA 700 MHz *Further Notice* Comments at 4-5.

⁹⁸⁴ See MSV 700 MHz *Further Notice* Comments at 6.

forth in the NSA. We believe that requiring the parties to address, as part of the NSA, how and by what date the D Block licensee will offer a handset with a seamlessly integrated satellite solution is reasonable and may encourage speedier development of such handsets for public safety use.

467. *In addition to requiring the D Block licensee to offer at least one handset with a seamlessly integrated satellite technology, we strongly encourage the Public Safety Broadband Licensee to work with its constituent public safety entities throughout the country to facilitate the availability of a variety of satellite-based options. Such options could include the Public Safety Broadband Licensee using its relatively stronger market power to negotiate large-scale satellite service agreements with existing providers, working with the D Block licensee to negotiate for satellite service to expand or expedite build-out to rural areas, and exploring use of a multitude of existing and future technologies, including satellite-capable handsets, separate satellite-only handsets, mobile satellite base stations that can be deployed into areas where terrestrial facilities are damaged or destroyed, etc.*

468. We decline to mandate the incorporation of support for satellite communications by the D Block licensee into the infrastructure of the shared network. Although such incorporation might provide some additional communications capacity, if the Public Safety Broadband Licensee contracts for terrestrial use of satellite frequencies, it would also impose additional costs that might hinder build-out of the terrestrial network. A mandate for specialized support may interfere with the D Block licensee's ability to take advantage of commercial off-the-shelf network facilities or rely on existing CMRS architecture, both of which might assist greatly in making a national build-out cost effective.⁹⁸⁵ We believe that the D Block licensee and the Public Safety Broadband Licensee will be in the best position to determine whether and when satellite support within the terrestrial infrastructure is appropriate, and by what method it should be implemented, such as by negotiating a side-agreement with existing satellite service providers to use their excess capacity for public safety communications.

g. Local Public Safety Build-out and Operation

469. Background. Several commenters on the Frontline proposal recommend that participation by public safety entities be voluntary, in the sense that public safety entities could use their own network operating in spectrum other than the 700 MHz public safety broadband spectrum if they so chose.⁹⁸⁶ Commenters also recommend, however, that public safety entities be permitted to build out their own networks in the 700 MHz public safety broadband spectrum to some extent. Some argue for allowing public safety entities generally to choose other arrangements in the 700 MHz broadband spectrum either because it would promote competition among potential commercial partners to provide public safety entities with service at a better quality and price,⁹⁸⁷ or because it would provide public safety

⁹⁸⁵ See Verizon Wireless 700 MHz Public Safety Ninth Notice Comments at 6-14 (finding that public safety will receive "significant benefits" from taking advantage of commercial off-the-shelf equipment, and also from sharing infrastructure with existing CMRS networks); see also High Tech DTV Coalition 700 MHz Public Safety Ninth Notice Comments at 10-14.

⁹⁸⁶ See Motorola 700 MHz Further Notice Comments at 30 ("if the Commission adopts Frontline's plan, public safety should not be required to use Frontline's network. While Motorola believes that public safety would likely choose to use a purpose-built network, like the one proposed by Frontline, public safety should not be precluded from using devices on other carriers' networks, an option they already have today, if they so choose."); Cyren Call 700 MHz Further Notice Reply Comments at 22 (supporting proposal that "[n]o public safety agency or entity will be required to operate on the network; participation is entirely voluntary based on decisions made by the same communications officials who decide today how local, statewide and regional communications requirements should be met").

⁹⁸⁷ See Verizon Wireless 700 MHz Further Notice Comments at 45 (asserting that Commission must ensure that any rights granted to the D Block licensee do not foreclose opportunity for public safety entities to consider other (continued....))

entities with greater control over their own network services, enabling them to take advantage of their expertise and knowledge to tailor their network services to local needs.⁹⁸⁸ For example, APCO argues that the Commission needs to preserve local options to facilitate deployment of data systems in areas where the national network may not be deployed for many years.⁹⁸⁹

470. *Discussion.* We conclude that no public safety entity will be required to use the 700 MHz public safety broadband network, and that any participation in the 700 MHz nationwide public safety network by individual public safety entities will be entirely voluntary. We also conclude, however, that the Upper 700 MHz Band D Block licensee should have the exclusive right to build and operate the shared wireless broadband network using the 700 MHz public safety broadband spectrum, except that we permit public safety entities to construct local broadband networks in the 700 MHz public safety spectrum in two limited circumstances subject to conditions specified below. We further conclude that public safety entities should have a limited right to build out wideband networks, again with conditions and restrictions.⁹⁹⁰

471. *Rights to Early Build-out in Areas with a Build-out Commitment.* First, in an area where the D Block licensee has, in the NSA, committed to build out by a certain date, but where a public safety entity wishes a more immediate build-out, the public safety entity may, with the pre-approval of the Public Safety Broadband Licensee, have the network constructed in that area at the public safety entity's own expense. The network must be capable of operating on the shared, interoperable broadband network that operates on both the D Block licensee's commercial block and the public safety 700 MHz broadband spectrum, and must meet all of the same requirements and specifications as the shared network required under the NSA.

472. We authorize two options for implementing the early build-out of an area of the broadband network at the discretion of the public safety entity. Under the first option, the public safety entity (or the Public Safety Broadband Licensee acting on its behalf) may construct the network in that area. Upon construction, it must transfer the network to the D Block licensee, which shall integrate that network into the shared national broadband network constructed pursuant to the NSA. Under the second option, the public safety entity may require the D Block licensee to construct the network in that area earlier than scheduled, but the public safety entity must provide all funds necessary for the early construction of the network, including any and all additional resource and personnel costs. As with the first option, upon construction, the D Block licensee will operate and manage the network as an integrated part of the larger shared national broadband network.

473. In either case, the Public Safety Broadband Licensee, the D Block licensee, and the public safety entity must, prior to any construction, negotiate an amendment to the NSA regarding this part of the network, specifying ownership rights, fees, and other terms, which may be distinct from the analogous terms governing the shared national broadband network. Absent agreement to the contrary, the amendment must provide that by a date no later than the build-out date specified for that area in the NSA, the D Block licensee will receive full ownership rights and will in turn compensate the public safety entity (or the Public Safety Broadband Licensee, where appropriate) for the construction of the network. The right to compensation for the build-out shall be limited, again absent agreement to the contrary, to the cost that would have been incurred had the D Block licensee constructed the network itself in accordance
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commercial partnerships, and arguing that competition for emergency communications services will ensure that first responders get the best price, quality, and capabilities that commercial companies have to offer).

⁹⁸⁸ See RCC 700 MHz Further Notice Comments at 54-55, 66.

⁹⁸⁹ APCO 700 MHz Further Notice Comments at 20-22.

⁹⁹⁰ We address the specific case of public safety entities that wish to build out networks with wideband operations, as opposed to broadband operations, elsewhere in this Second Report and Order.

with the original terms and specifications of the NSA. Thus, while the public safety entity may construct a more expensive network, the D Block licensee will only be responsible for the costs of a network comparable to what it would have constructed in accordance with the original terms of the NSA, and any costs attributable solely to advancing the date of construction will not be compensable.

474. We point out that early build-out in this scenario is a right to construct only. Operations may not commence on the network until the network is transferred to the D Block licensee. Operations on early build-out networks would then be conducted under the authority of the Public Safety Broadband Licensee's license, in the same manner as any network operations that occur following construction by the D Block licensee under the build-out schedule contained in the NSA.

475. Starting on the date of compensation for build-out, or on the build-out due date of the NSA if there is no specified date of compensation, the D Block licensee may include the early build-out for purposes of determining whether it has met its national build-out benchmarks and the build-out requirements of the NSA.⁹⁹¹

476. We note that the National Capital Region (NCR) has commenced construction and operation of a broadband network in the 700 MHz Band pursuant to an experimental license and has been granted a waiver in anticipation of its application for a license to operate such system.⁹⁹² The NCR consists of eighteen jurisdictions: The District of Columbia, Montgomery and Prince Georges Counties of Maryland, and the cities of Gaithersburg, Rockville, Takoma Park, Bowie, College Park, and Greenbelt; Arlington, Fairfax, Loudon and Prince William Counties of Virginia, and the cities of Alexandria, Falls Church, Town of Leesburg, Manassas, and Manassas Park.⁹⁹³ Although NCR cannot now obtain a license, as such license will be held by the Public Safety Broadband Licensee, nothing herein should be construed as preventing or limiting NCR's ability to continue to operate the broadband network they have built within the 700 MHz broadband allocation (subject to NCR properly obtaining a grant of a request for Special Temporary Authority for such continued operation) until such time as the NCR network is integrated into the nationwide, interoperable broadband network in accordance with the build-out plan set forth in the NSA.

477. NCR, in requesting the waiver to operate its broadband network, specifically represented that it "fully underst[ood] and accept[ed] that as a result of any rulemaking changes the Commission may make, the NCR will have to comply with the results of such rule [sic] making and may have to do one of the following to continue the use of the 700 MHz spectrum for public safety broadband wireless communications: 1. Modify its proposed network. For example, we may have to change the center frequency of the carriers and the filters to protect narrowband operations; or 2. Change the proposed network. For example, we may have to change the underlying technology, and therefore, have to change the equipment to use a standard that is different from that chosen by the NCR (1xEVDO Rev A); or 3. Transition to a 700 MHz public safety national broadband wireless network that is managed by a single national licensee."⁹⁹⁴ In fact, the waiver grant to NCR was explicitly conditioned on those

⁹⁹¹ Parties are thus free to provide that the ownership of the network will remain with the constructing public safety entity, in which case, the D Block licensee will owe no compensation for the build-out costs to that entity, and the network will not be counted toward the D Block licensee's build-out requirements until the build-out date specified for that area in the Network Sharing Agreement.

⁹⁹² See Request by National Capital Region for Waiver of the Commission's Rules to Allow Establishment of a 700 MHz Interoperable Broadband Data Network, WT Docket No. 96-86, Order, 22 FCC Rcd 1846 (PSHSB 2007)(NCR Waiver Order).

⁹⁹³ See The National Capital Planning Act of 1952, 40 U.S.C. § 71.

⁹⁹⁴ NCR Waiver Order at 1849 ¶ 8, quoting letter from Bill Butler, NCR Interoperability Program, OCTO-Wireless Programs Group, to Marlene H. Dortch, Secretary, FCC (Jan. 29, 2007) and attached e-mail from Robert L. (continued...)

representations, which are incorporated into the NCR Waiver Order as part of the conditions of the waiver.

478. We advise the Public Safety Broadband Licensee to consult NCR in negotiating the build-out date for the nationwide, interoperable network, as the build-out plan in the NSA should allow *NCR a reasonable time to make any modifications necessary to incorporate its network into the nationwide, interoperable broadband network by the date set forth in the NSA for build out of the portion of the nationwide, interoperable broadband network in the NCR.* NCR will, of course, be expected to comply with the requirements set forth herein for public safety entities exercising the right to early build out, and NCR shall be entitled to the same rights and compensation as set forth herein for public safety entities electing to exercise their right to early build out.

479. The Spectrum Coalition would have us give local public safety entities, including NCR, the ability to “opt-out” of the national, interoperable broadband network, yet operate individual systems in the 700 MHz Band. We flatly reject such argument; *local public safety entities do not have to participate in the nationwide network, but they may not “opt-out” in favor of using the 700 MHz broadband spectrum for individual networks.* As a general matter, as we have discussed above, there are numerous benefits to having a single Public Safety Broadband Licensee.⁹⁹⁵

480. *Rights to Build Out and Operate In Areas without a Build-out Commitment.* We acknowledge that, even under the stringent population-based build-out requirements that we are adopting, there will be areas of the nation in which the NSA does not require the D Block licensee to build out the shared broadband network. In such areas, under the policies and procedures discussed below, we provide that a public safety entity may build out and operate a separate, exclusive network in the 700 MHz public safety broadband spectrum at any time, provided the public safety entity has received the approval of the Public Safety Broadband Licensee and operates its independent network pursuant to a spectrum leasing arrangement into which the public safety entity has entered with the Public Safety Broadband Licensee.

481. Under this option, the public safety entity need not obtain any agreement with the D Block licensee. The Public Safety Broadband Licensee must, however, provide the D Block licensee with notice of the public safety entity’s intent to construct in that area within 30 days of receipt of a request from a public safety entity wishing to exercise this option, and shall inform the D Block licensee of the public safety entity’s anticipated build-out date(s). This affords the D Block licensee the opportunity, in conjunction with the Public Safety Broadband Licensee, to reconsider whether the NSA should be revised to include a commitment to build out the area that the public safety entity has identified. Further, if within 30 days of receiving such notice the D Block licensee certifies in writing to the Public Safety Broadband Licensee that it will build out the shared network in the area, within a reasonable time of the anticipated build-out date(s), as determined by the Public Safety Broadband Licensee, then the public safety entity shall not have the option of building out and operating its own separate exclusive network in the area. Under this circumstance, the D Block licensee, working with the Public Safety Broadband Licensee, must then adopt an appropriate amendment to the NSA, and such commitment would become enforceable against the D Block licensee as part of its build-out requirements. We note also that, as an alternative in such cases, the public safety entity would be able to complete early build-out under the procedures we discuss above.

482. If the public safety entity pursues this option to build out a separate network, the Public Safety Broadband Licensee and public safety entity, as its spectrum lessee, must file a spectrum leasing

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LeGrande, II, NCR Interoperability Program. Deputy Chief Technology Officer, District of Columbia, to Dana Shaffer, Deputy Chief, Public Safety and Homeland Security Bureau, FCC (Jan. 28, 2007).

⁹⁹⁵ Specific to NCR, we reject such argument as inconsistent with the explicit representations they made in obtaining a waiver and the very waiver conditions themselves.